

REMARKS ON BOTANY.—Continued.

"JAMES VICK—*Dear Sir* :—For the past two years I have been an interested reader of your FLORAL GUIDE, and the more I read them the more I realize my ignorance in regard to flowers. You were kind enough last year to give us the pronunciation of many names of flowers, which was a great benefit to at least one of your admirers. Now, I want you to do us another favor, that is, give us the meaning of certain names of plants in plain English. For instance, take the Lilies, with their peculiar names, as *Longiflorum*, *Lancifolium*, &c., &c. To you, I presume these names are thoroughly understood, but a great many of your patrons are entirely ignorant of them; so, please, educate us children up to a higher standard than we now occupy, won't you? It is possible that you may have given the desired information in some early number, but if you have, your circulation has increased to such an extent that it will be doing your old customers no harm to repeat it.—C. W. L., New York City.

In accordance with the suggestions not only of the writer of the above, but of many others, we have endeavored to give such a brief explanation of Botanical terms as to be liable to include in a few pages most of the words in general use, and also to make the meaning so plain, by the aid of a few illustrations, that those who run may not only read, but understand, and begin to think that Botany is not a very difficult study after all, and that the words that have looked so formidable are really not so hard as they appeared; and, indeed, are interesting and eminently descriptive. For instance, *Longiflorum* denotes the form of the flower, *long-flowered*; *Lancifolium* describes the form of the leaf, *lance-leaved*—*florum* always denoting the flower, and *folium* the foliage or leaves. This being known, the matter is not only simple, but very interesting, and once known can never be forgotten. The ease with which we become familiar with these words will be a surprise to all who give the subject a little attention.

A few of our readers think that we should give common or familiar names, but a moment's thought will show that this would be utterly impossible. Many of our flowers are known by a dozen common names, and only by one of these, perhaps, in any one section of the country. Common names come like nicknames. We always give the popular name of a flower in all cases where it has one sufficiently common to be of any use. The PANSY, for instance, is a common name, *Viola tricolor* being its true name, meaning, of course, *Three-colored Violet*; but the name Pansy has become known wherever the English language is spoken, at least, and so we give this name, but it has a dozen other common names not so well known, such as *Heartsease*, *Violet*, *Love and Illness*, *Johnny-Jump-Up*, &c. The Germans call it *Stepmother*, and the Italians *Mother-and-Daughter-in-Law*. Of course if the name Pansy had not become so common, we could have given only the scientific name.

BOTANICAL GLOSSARY.

ABORTIVE : Imperfectly developed.
ACHENIUM : A small, hard, seed-like fruit.
ACULEATE : Furnished with prickles.
ALA : A wing; plural *alæ*; the side petals of a papilionaceous flower. *See Wing*.
ALATE : Winged; as seeds of the Maple, Elm, &c.
ALTERNATE : Leaves are said to be alternate when they are situated first on one side and then on another of the stem or branch, but not opposite to each other.
AMENT : A scaly spike, as the Willow; a catkin.
ANTHER : The head and essential part of the stamen, containing the pollen.
APETALOUS : Destitute of petals.
AURICULATE : Having lobes or appendages, like the ear, as at the base of some leaves.
AXIL : The angle or upper side between the leaf and stem.
AXILLARY (buds, &c.) : Situated in the axil.
BELL-SHAPED : Having a bell-form.
BERRY : A fruit, pulpy or juicy throughout; as the Gooseberry, Cranberry, Tomato, &c.
BILABiate : Two lipped; as the corolla of the Salvia, &c.
BRACT : A small leaf or scale, from the axil on which a flower or its pedicel proceeds. Bracts in general, are the leaves of an inflorescence more or less different from ordinary leaves.
BRACKET : A bract on the pedicel or flower-stalk.
BUD : A roundish body produced by a plant either above or below the ground, (usually the latter,) and which is really a bud. It consists of a cluster of partially developed leaves, and as it grows it produces a stem and roots; as the Tulip, Lily, &c.

CALYX : The outer covering or leaf-like envelope of a bud or flower, as shown at A in the engraving.
CAMPANULATE : Bell-shaped.
CAPISLE : Any dry seed vessel or pod which opens by seams in a regular way.
CARPEL : A simple pistil, or one of the parts of a compound pistil.
CATKIN : A scaly, deciduous spike of flowers; an ament.
CILIAE : Having the margin furnished with a fringe of hairs or bristles like the eyelashes fringing the eyelids.
CLAW : The narrow base of some petals.
CORDATE : Heart-shaped; as a cordate leaf.

HINTS TO FIREMEN.

The *Mechanical Journal* notes some good points in firing for steam boilers, which, although they may not strike the reader as new, may be of assistance to some amateur stokers: "An engineer should allow his fire to burn gradually when commencing to get up steam from cold water, as, by allowing the fuel to burn very rapidly some parts of the boiler become expanded to their uttermost limits, while other parts are nearly cold. Of course a great deal depends upon the time in which he has to raise his steam. An engineer should regulate his fire at a uniform thickness, and not allow any bare places or accumulations of ashes or dead coals in the corners of the furnace, as these places admit great quantities of cold air into the furnace and render the combustion very imperfect. An engineer should avoid excessive firing as much as possible, as it is attended with more or less danger, because the intense heat repels the water from the surface of the iron and allows the boiler to be burned. He should keep about three inches of anthracite coal and about five inches of soft coal on his fires, but he should regulate the thickness of the fire according to the capacity of the boiler. If the boiler is too small for the engine the fire should be kept thin, the coal supplied in small quantities and distributed evenly over the grate, and the grate kept as free as possible from ashes and cinders; but if the boiler is extra large for the engine, the thickness of the fire makes but little difference. If the fire becomes very low, he should neither poke nor disturb it, as that would have a tendency to put it entirely out; but he should place shavings, sawdust, wood or greasy waste on the bare places, with a thin covering of oil; then, by opening the draft to its full extent, the fire will soon come up. If it should become necessary to burn wood on a coal fire, it is always best to make an opening through the coal to the grate bars, so that the air from the bottom of the furnace can act directly on the wood and increase the combustion. He should give great attention to the regulation of the draft in the furnace, as it is one of the most important parts of an engineer's duties, for in fact it is next in importance to the regulation of the water in the boiler."

A LEGEND ABOUT COFFEE.—There is a legend about coffee, a legend of which a pious Mussulman is the hero. The Mussulman used to get sleepy during his devotions, and so he prayed to Mahomet, who came to his aid. Mahomet set to him for advice to a goat herd, who took a hint from his goats. He observed when these animals ate the berries of a particular tree they got frisky and excited—bounded about all the night, in fact. The Mussulman took the hint, ate the coffee berries, slept less, and, no doubt, prayed better. That was the legend. That coffee however, was sold in the streets of Cairo towards the end of the sixteenth century is not a matter of legend, but of history—in fact, it was not only sold, but it was forbidden to be sold. An Arabian historian recounts that in the year 1538 a *café* was attacked by the authorities, and the customers who came found on the spot hurried off to prison, from which they were not liberated till they had each received seventeen strokes with a stick, *pour encourager les autres*. And, in fact, this raid served that purpose so excellently that five-and-twenty years afterwards the town of Cairo could boast of more than 2000 shops where coffee might be bought. From Cairo to Constantinople was, in those days, a necessary transition, and the new drink once established in Europe, soon made its way to the West. It is recorded that the first cup of coffee known to have been prepared in France was handed to Louis XIV., to drink. It was a royal beverage in those days: a pound of it cost 5*l.* 16*s.* But this extravagance of price must have abated soon, for not long afterwards several shops were opened for its sale, and in 1647, Thève-not, giving a very select dinner party, offered each of his guests, after their wine, a cup of coffee.—*Cassell's Family Magazine*.